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LAM, HUNG H	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/004,685	HAAVISTO, JANNE	
	Examiner	Art Unit	
	HUNG H. LAM	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 October 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9,11-17 and 19-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,11-17 and 19-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12/05/01* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendments, filed on 10/23/08, have been entered and made of record. Claims 10 and 18 are canceled. Claims 23-32 are added. Clams 1-9, 11-17 and 19-32 are pending.

Response to Arguments

2. Applicant's arguments filed 10/23/08 have been fully considered but they are not persuasive.

Regarding claims 1 and 11, the Applicants argue that "in Zimmermann, there can be no showing of the transmission of the statistical data from the collector 306 (present Fig. 1) via an interlace 320 over an interface 310 from a camera module 301 to the electronic device 302 (present Fig. 1). Zimmermann, therefore, does not show a basic aspect of the presently claimed subject matter". The Examiner respectfully disagrees. it is noted that the features upon which applicant relies (i.e., "there can be no showing of the transmission of the statistical data from the collector 306 (present Fig. 1) via an interlace 320 over an interface 310 from a camera module 301 to the electronic device 302 (present Fig. 1)") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The Applicants further argue that the image processing system of Tsai is a device (digital camera) that does not transmit any data. The Examiner respectfully disagrees. The Examiner has never relied upon Tsai reference to transmit any data. Since the claim language only requires to use "said statistical data for adjusting said image sensor of the camera module for generating image data for a next image", the referred statistical data can be interpreted as the statistical data that are “collected from said image data”, or used “for processing an image to be generate” or “the statically data that are transmitted with the image at the same time to an electronic device”. In other word, the Examiner only relied on Tsai to teach an imaging device computing image statistics based on image data in a data processor for functions such that focusing, exposure control and white balance of the photographed image (Tsai: Col. 3, Ln. 48-55).

Regarding the rejection of claims 1 and 11 under the combination of Zimmermann in view of Prentice, the Applicants argue that " due to the foregoing observations, Prentice has not fully disclosed what information is being used to control the camera. Furthermore, Prentice is controlling the camera only periodically, rather that continuously. Therefore, this reference does not provide an adequate suggestion to modify the system of Zimmermann so that the statistical data for adjustment of the image sensor of the camera is available for use in the generation of image data for a next image.”

The Examiner respectfully disagrees. In Prentice reference the automatic exposure control modifies the contrast and the brightness settings based on a

luminance histogram of the previously captured images ([0057]). By definition, in statistics, a histogram is a graphical display of tabulated frequencies shown as bars. Therefore, the luminance histogram of previously captured images is interpreted as a form of statistical data which are used for exposure control and/or brightness setting. The claim language does not specifically require to control the camera continuously. Therefore, it is irrelevant to whether the camera is controlled periodically or continuously. In view of the above, the Examiner believes the combination of Zimmermann and Prentice does in fact teach luminance histogram data (interpreted as statistical data) of the previously captured images is used for exposure and/or brightness setting control of the camera.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmermann (US-6,704,310) in view of Tsai (US-6,750,909).

With regarding to **claim 1**, the claim is a method of an apparatus claim 11. Therefore, claim 1 is rejected and analyzed as the limitations claimed in claim 11.

With regarding to **claim 11**, Zimmermann discloses a device comprising a camera module and an electronic device (Fig. 1; camera 41/USB device; Col. 1, Ln. 5-20; Col. 4, Ln. 21-28; Col. 6, Ln. 14-41; a host is inherently connected to USB 20), comprising means for generating image data in the image sensor of the camera module (Figs. 1; camera 41), said image sensor comprising at least one row of pixels and said image data comprising the data generated by said rows of pixels Col. 3, Ln. 51-55; the image sensor 12 inherently includes at least one row of pixels and generates image data from the row of pixel), a means for collecting statistical data on said image data (Col. 3, Ln. 23-25; Col. 5, Ln. 55-60), wherein said statistical data is suitable for processing an image to be generated (Col. 5,Ln. 55-67); wherein the device further comprises means for transmitting image data and statistical data from the camera module to the electronic device essentially at the same time (Fig. 6; see image and statistics data from two USB packets 94 and 96; Col. 6, Ln. 1-46).

However, Zimmermann fails to explicitly disclose a means for adjusting on the basis of said statistical data, said image sensor of the camera module for generating image data for a next image.

In the same field of endeavor, Tsai teaches an imaging device wherein functions of focusing, exposure control and white balance of the photographed image data are done by computing image statistics based on image data in a data processor (Col. 3, Ln. 48-55). In light of the teaching from Tsai, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Zimmermann by computing image statistics to perform the functions of focusing,

exposure control and white balance. The modifications thus provide a control loop back camera system with better image quality.

5. Claims 1-9, 11-17, 19-26 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmermann (US-6,704,310) in view of Prentice (US-2003/0,030,729).

With regarding to **claim 1**, Zimmermann discloses a method for the transmission of data between a camera module and an electronic device (Fig. 1; camera 41/USB device; Col. 1, Ln. 5-20; Col. 4, Ln. 21-28; Col. 6, Ln. 14-41; a host is inherently connected to USB 20), said method comprising the steps of generating image data in the image sensor of the camera module (Figs. 1; camera 41), said image sensor comprising at least one row of pixels, and said image data comprising the data generated by said row of pixels (Col. 3, Ln. 51-55; the image sensor 12 inherently includes at least one row of pixels and generates image data from the row of pixel), collecting statistical data from the image data (Col. 3, Ln. 23-25; Col. 5, Ln. 55-60), wherein said statistical data is suitable for processing an image to be generated (Col. 5,Ln. 55-67); and wherein the method further comprises: transmitting said image data and said statistical data from the camera module to the electronic device essentially at the same (Fig. 6; see image and statistics data from two USB packets 94 and 96; Col. 6, Ln. 1-46).

However, Zimmermann fails to explicitly disclose using said statistical data for adjusting said image sensor of the camera module for generating image data for a next image.

In the same field of endeavor, Prentice teaches an imaging device wherein automatic exposure control modifies contrast and brightness setting bases on a luminance histogram of previously captured images ([0057]; the luminance histogram of the previously captured images is interpreted as said statistical data). Prentice further teaches a host computer 12 that controls a camera picture-taking process by setting the exposure time via the CCD timing generator 32 from the microprocessor 38 ([0024]). In light of the teaching from Prentice, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Zimmermann to perform automatic exposure control from a luminance histogram of previously captured images. The modifications thus provide better image quality.

With regarding to **claim 2**, Zimmermann in view of Prentice discloses a method wherein said image data and said statistical data are transmitted interlaced with each other on at least one common bus (Zimmermann: Fig. 6; see USB 20, image and statistics data from two USB packets 94 and 96; Col. 6, Ln. 1-46).

With regarding to **claim 3**, Zimmermann in view of Prentice discloses a method wherein said image data and said statistical data are transmitted in the same data frame (Zimmermann: Col. 6, Ln. 1-46), said data frame comprising at least one image data unit at least one statistical data unit (Zimmermann: Fig. 6; see image and statistics

data from two USB packets 94 and 96), and at least one synchronization code to separate said image data unit from said statistical data unit (Zimmermann: Col. 4, Ln. 45-65; Col. 6, Ln. 14-41).

With regarding to **claim 4**, Zimmermann in view of Prentice discloses a method wherein said image data unit comprises image data generated by at least one said row of pixels (Zimmermann: Col. 3, Ln. 51-55; the image sensor 12 inherently includes at least one row of pixels and generates image data from the row of pixel).

With regarding to **claim 5**, Zimmermann in view of Prentice discloses a method wherein said row of pixels is a vertical or horizontal row in said image sensor (Zimmermann: Col. 3, Ln. 51-55; Col. 4, Ln. 10-20).

With regarding to **claim 6,** Zimmermann in view of Prentice fails to explicitly disclose wherein said data frame is transmitted from the camera module to the electronic device in the form of a serial synchronized differential signal (Zimmermann: Fig. 1; USB 20; Col. 6, Ln. 1-46; Prentice: USB 42).

With regarding to **claims 7,** Zimmermann in view of Prentice discloses wherein the camera module and the electronic device are integrated into one single device and that said bus is a device-internal bus (Zimmermann : camera system 41-42 and an inherent host computer that connected to USB 20; Prentice: Figs. 1-2; see Webcam 10 and USB I?F device; [0020-0024]).

With regarding to **claim 8,** Zimmermann in view of Prentice discloses a method wherein said transmitted statistical data is used as the generation basis for at least one parameter related to image processing (Zimmermann: Col. 5, Ln. 56-67; Prentice: [0057]).

With regarding to **claim 9,** Zimmermann in view of Prentice discloses a method wherein said at least one image-processing parameter created is used for the processing of the image to be generated (Zimmermann: Col. 5, Ln. 56-67; Prentice: [0057]).

With regarding to **claim 11**, Zimmermann discloses a device comprising a camera module and an electronic device (Fig. 1; camera 41/USB device; Col. 1, Ln. 5-20; Col. 4, Ln. 21-28; Col. 6, Ln. 14-41; a host is inherently connected to USB 20), comprising means for generating image data in the image sensor of the camera module (Figs. 1; camera 41), said image sensor comprising at least one row of pixels and said image data comprising the data generated by said rows of pixels (Col. 3, Ln. 51-55; the image sensor 12 inherently includes at least one row of pixels and generates image data from the row of pixel), a means for collecting statistical data on said image data (Col. 3, Ln. 23-25; Col. 5, Ln. 55-60), wherein said statistical data is suitable for processing an image to be generated (Col. 5,Ln. 55-67); wherein the device further comprises means for transmitting image data and statistical data from

the camera module to the electronic device essentially at the same time (Fig. 6; see image and statistics data from two USB packets 94 and 96; Col. 6, Ln. 1-46).

However, Zimmermann fails to explicitly disclose a means for adjusting on the basis of said statistical data, said image sensor of the camera module for generating image data for a next image.

In the same field of endeavor, Prentice teaches an imaging device wherein automatic exposure control modifies contrast and brightness setting bases on a luminance histogram of previously captured images ([0057]; the luminance histogram of the previously captured images is interpreted as said statistical data). Prentice further teaches a host computer 12 that controls a camera picture-taking process by setting the exposure time via the CCD timing generator 32 from the microprocessor 38 ([0024]). In light of the teaching from Prentice, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Zimmermann to perform automatic exposure control from a luminance histogram of previously captured images. The modifications thus provide better image quality.

With regarding to **claim 12**, Zimmermann in view of Prentice discloses the same limitations as recited in claim 3. Therefore, claim 12 is analyzed and rejected as discussed in claim 3.

With regarding to **claim 13**, Zimmermann in view of Prentice discloses a device wherein said data frame comprises said image data and said statistical data interlaced

with each other and that said data frame is transmitted from the camera module to the electronic device on at least one bus (Zimmermann: Fig. 1; USB 20; Col. 6, Ln. 1-46; Prentice: USB 42).

With regarding to **claim 14,** Zimmermann in view of Prentice fails to explicitly disclose wherein said data transmission means are additionally implemented for transmitting said data frame from the camera module to the electronic device in the form of a serial synchronized differential signal (Zimmermann: Fig. 1; USB 20; Col. 6, Ln. 1-46; Prentice: USB 42).

With regarding to **claim 15,** Zimmermann in view of Prentice discloses the same subject matter as claimed in claim 11. Further more, Davis discloses a device wherein the device also comprises means for generating an image-processing parameter from the transmitted statistical data (Zimmermann: Col 5, Ln. 56-Col. 6, Ln. 41).

With regarding to **claim 16,** Zimmermann in view of Prentice discloses a device, wherein in addition, the device comprises means for image data processing to process the transmitted image data based on said image-processing parameter (Col. 6, Ln. 14-42: Zimmermann teaches the reception of statistics and image data at a host side; Col. 5, Ln. 60-67: Zimmermann teaches the usages of statistics data for adjusting white balancing).

With regarding to **claim 17,** Zimmermann in view of Prentice discloses a device wherein said means for image data processing have been implemented for processing the image to be generated (Zimmermann: Col 5, Ln. 56-Col. 6, Ln. 41).

With regarding to **claim 19**, Zimmermann in view of Prentice discloses a device wherein said device comprising said camera module and an electronic device (Zimmermann: Fig. 1; camera 41 and host computer; Prentice: Web camera 22 and host computer 12).

However, Zimmermann in view of Prentice fails to explicitly disclose said electronic device is a mobile communications terminal.

Official Notice is taken that it is well known and expected in the art to connect a webcam camera to portable laptop computer (host computer) via USB bus. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the devices of Zimmermann and Prentice by substituting a host computer with a laptop computer. The modifications thus provide more flexible the host computer.

With regarding to **claim 20**, Zimmermann in view of Prentice discloses a device according to claim 19, wherein said electronic device and said camera module are integrated into one single device and wherein transmission of said image data and said statistical data from the camera module to the electronic device is accomplished on at least one device-internal bus (Zimmermann : camera system 41-42 and an inherent

host computer that connected to USB 20; Prentice: Figs. 1-2; see Webcam 10 and USB I?F device; [0020-0024]).

With regarding to **claim 21,** Zimmermann in view of Prentice discloses a method wherein said collecting of statistical data from said image data performed said camera module, said statistical data including image brightness (Zimmermann: Col. 3, Ln. 23-25; Col. 5, Ln. 55-67).

With regarding to **claim 22**, Zimmermann in view of Prentice discloses the same limitations as claimed in claim 21. Therefore, claim 22 is analyzed and rejected as discussed in claim 21.

With regarding to **claim 23,** A device comprising:

a camera module and an electronic device (Fig. 1; camera 41/USB device; Col. 1, Ln. 5-20; Col. 4, Ln. 21-28; Col. 6, Ln. 14-41; a host is inherently connected to USB 20);

an image sensor within the camera module for generating image data (Figs. 1; camera 41), said image sensor comprising at least one row of pixels, and said image data comprising data generated by said at least one row of pixels (Col. 3, Ln. 51-55; the image sensor 12 inherently includes at least one row of pixels and generates image data from the row of pixel);

a statistical data collector for collecting statistical data from said image data (Col. 3, Ln. 23-25; Col. 5, Ln. 55-60), wherein said statistical data is suitable for processing an image to be generated (Col. 5,Ln. 55-67);

an interlacing device for transmitting image data and statistical data from the camera module to the electronic device essentially at the same time (Fig. 6; an interlacing device is inherently included in order to interlace image data 100 and statistical data 102 within a USB packet 94; see image and statistics data from two USB packets 94 and 96; Col. 6, Ln. 1-46).

However, Zimmermann fails to explicitly disclose a processor for adjusting said image sensor of the camera module, on the basis of said statistical data, for generating image data for a next image.

In the same field of endeavor, Prentice teaches an imaging device wherein automatic exposure control modifies contrast and brightness setting bases on a luminance histogram of previously captured images ([0057]; the luminance histogram of the previously captured images is interpreted as said statistical data). Prentice further teaches a host computer 12 that controls a camera picture-taking process by setting the exposure time via the CCD timing generator 32 from the microprocessor 38 ([0024]). In light of the teaching from Prentice, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Zimmermann to perform automatic exposure control from a luminance histogram of previously captured images. The modifications thus provide better image quality.

With regarding to **claim 24,** Zimmermann in view of Prentice discloses the device according to claim 23, wherein said interlacing device is implemented for transmitting said image data and said statistical data in the same data frame (Fig. 6; see image data 106 and statistical data 108), said data frame comprising at least one image data unit (106), at least one statistical data unit (108), and at least one synchronization code (104).

However, Zimmermann in view of Prentice fails to disclose at least one synchronization code to separate said image data unit from said statistical data unit.

Official Notice is taken that it is well known and expected in the art to include a synchronization code to separate two set of data. Therefore, it would have been obvious to one of ordinary skill in the art to modify the device of Zimmermann and Prentice to separate an image data from statistical data by at least one synchronization code. The modifications thus provide a better way of differentiating two different data within a data packet.

With regarding to **claim 25,** Zimmermann in view of Prentice discloses a device according to claim 24, wherein said data frame comprises said image data (100) and said statistical data (102) interlaced with each other (Fig. 6; see the interlace between 100 and 102) and that said data frame (see) is transmitted from the camera module to the electronic device on at least one bus (Zimmermann: Fig. 1; USB 20; Col. 6, Ln. 1-46; Col. 6, Ln. 1-46; Prentice: USB 42).

With regarding to **claim 26,** Zimmermann in view of Prentice discloses a device according to claim 25, wherein said interlacing device is additionally implemented for transmitting said data frame from the camera module to the electronic device in the form of a serial synchronized differential signal (Zimmermann: Fig. 1; USB 20; Col. 6, Ln. 1-46; Prentice: USB 42).

With regarding to **claim 30,** Zimmermann in view of Prentice teaches a camera having USB port connected to a host (Zimmermann: Fig. 2: camera substrate 41; USB 20; Prentice: Fig. 1: camera 10; USB 40-42 and host computer 12).

However, Zimmermann in view of Prentice fails to explicitly disclose wherein said device comprising said camera module and said electronic device is a mobile communications terminal.

Official Notice is taken that it is well known and expected in the art to integrate a camera, USB port and host computer into a single mobile laptop or separate them into separate mobile laptop and/or hand held camera. Therefore, it would have been obvious to one of ordinary skill in the art to modify the device of Zimmermann and Prentice to a single or separate mobile device. The modifications thus provide a more versatile camera and computer host system.

With regarding to **claim 31,** Zimmermann in view of Prentice disclose a device according to claim 30, wherein said electronic device and said camera module are integrated into one single device, and wherein transmission of said image data and said

statistical data from the camera module to the electronic device is accomplished on at least one device-internal bus (Prentice: Figs. 1-2; see Webcam 10 and USB I/F device; [0020-0024]).

With regarding to **claim 32,** Zimmermann in view of Prentice disclose a device according to claim 23, wherein statistical data collector for collecting statistical data from said image data is located in said camera module (Zimmermann: Fig. 7B; statistic collection circuit 124; Col. 6, Ln. 47-60), said statistical data including image brightness ([0057]: Prentice teaches a histogram of luminance of previous capture images for exposure control; Wherein the histogram is interpreted as statistical data and the luminance value is an indication of image brightness).

6. Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmermann in view of Prentice and further in view of Li (US-6,833,862).

With regarding to **claim 27,** Zimmermann in view of Prentice fails to explicitly disclose a device according to claim 23, further comprising a processor for generating an image-processing parameter from the transmitted statistical data.

In the same field of endeavor, Li teaches an imaging system (17) comprising a host (18) wherein the host 18 include a color processing unit 76 for perform AGC, AWB adjustment base on the statistics transmitted from the statistic collector 74 (Col. 1, Ln. 55-68; Col. 3, Ln. 9-30: it is inherent that the processing unit 76 generates processing

parameters to perform AGC and AWB adjustment). In light of the teaching from Li, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Zimmermann and Prentice to include a color processing unit 76 in a host to perform AGC and AWB base on the transmitted statistical data. The modifications thus provide better image quality.

With regarding to **claim 28,** Zimmermann in view of Prentice and further in view of Li discloses a device according to claim 27, further comprising an imaging processing unit to process the transmitted image data based on said image-processing parameter (Li: Col. 1, Ln. 55-68).

With regarding to **claim 29,** Zimmermann in view of Prentice and further in view of Li discloses a device according to claim 28, wherein said image processing unit is implemented for processing the image to be generated (Col. 1, Ln. 55-68; Col. 3, Ln. 9-55).

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG H. LAM whose telephone number is (571)272-7367. The examiner can normally be reached on Monday - Friday 8AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SINH TRAN can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HL
01/20/09

/Sinh N Tran/
Supervisory Patent Examiner, Art Unit 2622